4
5
6
7
8
9
10
11
1

3

4

5

6

7

3

	1
1.	A method, performed in a web based environment on a computer system, of helping a
user l	earn to implement an application, the method comprising:

providing a predetermined plurality of applications;

presenting an annotation page that includes one or more annotations descriptive of a source file of a predetermined application, each annotation including keyword links, annotation links, and detail of implementation of the application;

permitting the user to select a link in an annotation;

if the user selects a keyword link, presenting reference documentation associated with that keyword; and

if the user selects an annotation link, presenting another annotation descriptive of another source file of a predetermined application.

- 2. The method of claim 1 further comprising performing a predetermined application and presenting one or more annotations descriptive of the performed application in coordination with performance of the predetermined application.
- 3. The method of claim 2 in which performing the predetermined application comprises receiving input from the user.
- 4. The method of claim 3 further comprising presenting another annotation page in coordination with performance of the predetermined application based on input from the user.
- 5. The method of claim 4 in which presenting another annotation page comprises: automatically and simultaneously calling an annotation request module including application, file, class and function names of a program unit for which detail should be displayed;

mapping the request to an annotation; and

informing a browser window in the web-based environment to display the other annotation page.

- The method of claim 3 in which another annotation page is presented in coordination 2 with performance of the predetermined application. 7. The method of claim 6 further comprising automatically generating a global table of 1
 - contents comprising links to annotations by parsing structured links in web pages including annotation pages.
 - 8. The method of claim 7 in which the links in the global table of contents are synchronized with presented annotations by highlighting links corresponding to a current annotation page.
 - 9. The method of claim 8 in which the global table of contents is presented in a first frame of a first browser window, the annotation page is presented in a second frame of the first browser window, and the predetermined application is performed in a second browser window.
 - 10 The method of claim 2 in which performing the predetermined application comprises launching a Java applet or application.
 - 11. The method of claim 10 in which launching the Java applet or application comprises calling a Java application programming interface to ask a web browser to show the annotation page.
- 1 12. The method of claim 2 in which performing the predetermined application comprises 2 downloading a hyper-text markup language page containing a Java applet.
- The method of claim 2 in which performing the predetermined application comprises 1 13. 2 sending a common gateway interface request to a web server that launches the application in a window in the web-based environment.

2

3

2

3

1

3,411,411,41

6.

2

21.

The method of claim 20 in which generating the annotation page comprises

- 22. The method of claim 19 further comprising automatically updating the annotation page descriptive of the source code file of the predetermined application when an updated source code file is received.
 - 23. The method of claim 1 further comprising automatically generating a global table of contents by parsing the plurality of annotations for annotation links.
 - 24. The method of claim 23 further comprising providing the global table of contents, in which the global table of contents comprises links to annotations.
 - 25. The method of claim 23 further comprising generating a local table of contents, in which the local table of contents comprises links to web pages including annotation pages relating to an application.
 - 26. The method of claim 25 further comprising providing the local table of contents when a local link in the global table of contents is selected.
 - 27. The method of claim 1 in which the presented annotation page is descriptive of the performed application and the annotation page is presented in coordination with performance of the predetermined application.
 - 28. The method of claim 1 further comprising:
 generating a source code file stripped of annotation mark up, the generated source
 code file including source code of the application but not including text from the annotations;
 presenting the stripped source code file; and
 permitting the user to edit the stripped source code file.
 - 29. A method, performed in a web-based environment on a computer system, of teaching user to implement an application, the method comprising:

 providing a predetermined plurality of applications;

2

3

4

5
6
7
1
2
3
4
5
6

4

performing a	predetermined	aþ	plication;	and
--------------	---------------	----	------------	-----

1

presenting an annotation page descriptive of a performed application in coordination with performance of the predetermined application, the annotation page including detail of application implementation and links to annotations and reference documentation.

30. A method, performed in a web-based environment on a computer system, of teaching a user to implement an application, the method comprising:

automatically assembling a global table of contents based on content in the environment, the global table of contents including a plurality of links to content within the environment;

providing the global table of contents;

generating a local table of contents that includes links to content that orient the user within a local topic; and

permitting the user to select links from the local table of contents to access local topics.

31. A method, performed in a web-based environment on a computer system, of teaching a user to implement an application, the method comprising:

providing a plurality of predefined interactive examples;

performing one or more of the predefined interactive examples in response to user selection;

presenting one or more annotations descriptive of the performed interactive example in coordination with performance of the predefined interactive example; and

allowing the user to selectively explore different aspects of the performed interactive example, the annotations, or both.

32. A web-based computer system for teaching a user to implement an application, the system comprising:

one or more predefined interactive applications, a predefined interactive application selectively executable by the user of the web-based computer system; and

2

1

2

3

4

1

5	
6	
7	
8	
9	
10	

an annotation page including one	or more annotations, in which the annotation page
describes a predefined interactive applic	ation, and the annotation page further includes:

one or more links, and

detail of implementation of the application,

in which different annotations are automatically provided in the annotation page in response to selective execution of a predefined interactive application.

- 33. The system of claim 32 further comprising a utility through which the user can access source code associated with a predefined interactive application.
- 34. The system of claim 33 in which the utility enables the user to view or copy a predefined interactive application's source code.
- 35. The system of claim 32 in which detail of implementation of the application comprises text descriptive of the application, fragments of source code associated with the application, or both.
- 36. The system of claim 32 in which a link comprises a keyword link that provides the user with access to a body of reference documentation or an annotation link that provides the user with access to another annotation page.
- 37. The system of claim 32 further comprising a web-browser window that includes a framework that comprises:
 - a content frame that displays the annotations;
 - a framework applet that displays a navigation bar; and
 - a table of contents frame that displays a table of contents hierarchy of links.
- 38. The system of claim 37 in which the framework applet comprises a Java applet.

1

2

2

1

2

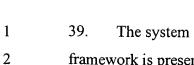
5

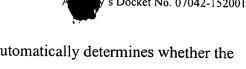
6

7

8

9





- The system of claim 37 in which a Java Script automatically determines whether the framework is present in the web browser window, and if the framework is present, notifies the framework applet about the content in the framework.
 - The system of claim 39 in which the table of contents automatically highlights a link 40. in the hierarchy based on the content in the framework.
 - The system of claim 40 in which the user accesses an annotation page by selecting a 41. link in the table of contents hierarchy.
 - The system of claim 40 in which the user accesses an annotation page by interacting 42. with the navigation bar.
 - 43. The system of claim 40 in which the table of contents highlights the hierarchy based on an annotation page displayed in the content frame.
 - The system of claim 37 in which the table of contents is dismissible or resizable. 44.
 - 45. A web-based computer system for teaching a user to implement an application, the system comprising:

a web-browser window that includes a content frame, a framework applet, and a table of contents frame that displays a global table of contents hierarchy of links related to content in the content frame;

one or more annotations displayed in the content frame, each annotation describing a predefined interactive application and including links to other content; and

a table of contents window that displays a local table of contents hierarchy of links related to local content in the displayed annotation.